CLAIMS

The current claims for this application are listed below.

1. (Currently amended) A motion estimation method comprising:

identifying, by a computer, one or more pixels in a first frame of a multi-view video sequence;

constraining a search range associated with a second frame of the multi-view video sequence to ~~an~~ a first area relative to a position of an epipolar line in the second frame, wherein the epipolar line corresponds to the one or more pixels in the first frame, the first area is defined by a having a height specified by a ~~desired~~ first correlation between efficient compression and semantic accuracy specified by a user, and the semantic accuracy relies on use of geometric configurations of cameras capturing the multi-view video sequence, and wherein constraining the search range comprises finding a position of an initial seed on the epipolar line using a disparity vector and wherein the constrained search range is centered around the initial seed ~~and a height of the search range is determined by the desired correlation between efficient compression and semantic accuracy~~; ~~and~~

searching the second frame within the constrained search range for a match of the one or more pixels identified in the first frame for subsequent use in computing a motion vector for the one or more pixels, the motion vector to be transmitted as part of a compressed representation of the first frame; and

searching a third frame within a search range constrained by a second correlation between efficient compression and semantic accuracy, the second correlation specified by the user and a value of the second correlation is different from a value of the first correlation.

2. (Previously Presented) The method of claim 1 wherein the position of the epipolar line depends on the geometric configurations of the cameras.

3. (Original) The method of claim 1 wherein the one or more pixels in the first frame represent a block.

4. (Previously Presented) The method of claim 1 further comprising:

computing the epipolar line in the second frame.

5. (Original) The method of claim 4 wherein the epipolar line is computed using a fundamental matrix.

6. (Currently amended) The method of claim 1 wherein constraining the search range comprises:

determining parameters of a window covering the initial seed and the epipolar line based on the ~~desired~~ first correlation between efficient compression and semantic accuracy.

7. (Canceled)

8. (Currently amended) The method of claim 1 further comprising:

receiving the ~~desired~~ <u>first</u> correlation between efficient compression and semantic accuracy from a user.

9. (Currently amended) The method of claim 8 further comprising:

communicating to a user a user interface facilitating user input of the ~~desired~~ <u>first</u> correlation between efficient compression and semantic accuracy.

10. (Currently amended) The method of claim 9 wherein the user interface provides a slider to enable the user to specify the <u>first</u> ~~desired~~ correlation between efficient compression and semantic accuracy.

11. (Previously Presented) The method of claim 9 wherein the user interface allows the user to modify a previously specified correlation between efficient compression and semantic accuracy at any time.

12. (Currently amended) A computer readable memory medium that provides computer program instructions, which when executed on a computer processor cause the processor to perform operations comprising:

identifying one or more pixels in a first frame of a multi-view video

sequence;

constraining a search range associated with a second frame of the multi-

view video sequence to ~~an~~ a first area relative to a position of an epipolar line in

the second frame, wherein the epipolar line corresponds to the one or more

pixels in the first frame, the first area is defined by a having a height specified by

a ~~desired~~ first correlation between efficient compression and semantic accuracy

specified by a user, and the semantic accuracy relies on use of geometric

configurations of cameras capturing the multi-view video sequence, and wherein

constraining the search range comprises finding a position of an initial seed on

the epipolar line using a disparity vector and wherein the constrained search

range is centered around the initial seed ~~and a height of the search range is~~

~~determined by the desired correlation between efficient compression and~~

~~semantic accuracy; and~~

searching the second frame within the constrained search range for a

match of the one or more pixels identified in the first frame for subsequent use in

computing a motion vector for the one or more pixels, the motion vector to be

transmitted as part of a compressed representation of the first frame; and

searching a third frame within a search range constrained by a second

correlation between efficient compression and semantic accuracy, the second

correlation specified by the user and the second correlation different from the

first correlation.

13. (Previously Presented) The computer readable memory medium of claim 12 wherein the position of the epipolar line depends on the geometric configurations of the cameras.

14. (Previously Presented) The computer readable memory medium of claim 12 wherein the one or more pixels in the first frame represent a block.

15. (Previously Presented) The computer readable memory medium of claim 12 wherein the operations further comprise:

computing the epipolar line in the second frame.

16. (Previously Presented) The computer readable memory medium of claim 15 wherein the epipolar line is computed using a fundamental matrix.

17. (Currently amended) The computer readable memory medium of claim 12 wherein constraining the search range comprises:

determining parameters of a window covering the initial seed and the epipolar line based on the ~~desired~~ <u>first</u> correlation between efficient compression and semantic accuracy.

18. (Canceled)

19. (Currently amended) The computer readable memory medium of claim 12

wherein the operations further comprise:

communicating to a user a user interface facilitating user input of the

~~desired~~ <u>first</u> correlation between efficient compression and semantic accuracy.

20. (Currently amended) A computerized system comprising:

a memory; and

at least one processor coupled to the memory, the at least one processor

executing a set of instructions which cause the at least one processor to

identify one or more pixels in a first frame of a multi-view video sequence,

constrain a search range associated with a second frame of the multi-view

video sequence to ~~an~~ <u>a first</u> area proximate to a position of an epipolar line in the

second frame, wherein the epipolar line corresponds to the one or more pixels in

the first frame, the <u>first</u> area is defined by a <u>having a height specified by a</u> ~~desired~~

<u>first</u> correlation between efficient compression and semantic accuracy <u>specified</u>

<u>by a user</u>, and the semantic accuracy relies on use of geometric configurations of

cameras capturing the multi-view video sequence, and wherein constraining the

search range comprises finding a position of an initial seed on the epipolar line

using a disparity vector and wherein the constrained search range is centered

around the initial seed ~~and a height of the search range is determined by the~~

~~desired correlation between efficient compression and semantic accuracy~~, and

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search the second frame within the constrained search range for a match

of the one or more pixels identified in the first frame for subsequent use in

computing a motion vector for the one or more pixels, the motion vector to be

transmitted as part of a compressed representation of the first frame, and

search a third frame within a search range constrained by a second

correlation between efficient compression and semantic accuracy, the second

correlation specified by the user and the second correlation different from the

first correlation.

21. (Previously Presented) The system of claim 20 wherein the position of the

epipolar line depends on the geometric configurations of the cameras.

22. (Original) The system of claim 20 wherein the one or more pixels in the first

frame represent a block.

23. (Currently amended) The system of claim 20 wherein the processor is to

constrain the search range by determining parameters of a window covering the

initial seed and the epipolar line based on the ~~desired~~ first correlation between

efficient compression and semantic accuracy.

24. (Canceled)

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25. (Currently amended) The system of claim 20 wherein the processor is further to communicate to [[a]] the user a user interface facilitating user input of the ~~desired~~ first correlation between efficient compression and semantic accuracy.

26. (Currently amended) A motion estimation apparatus comprising:

a block identifier to identify one or more pixels in a first frame of a multi-view video sequence;

a search range determinator to constrain a search range associated with a second frame of the multi-view video sequence to ~~an~~ a first area proximate to a position of an epipolar line in the second frame, wherein the epipolar line corresponds to the one or more pixels in the first frame, the first area is defined by a having a height specified by a ~~desired~~ first correlation between efficient compression and semantic accuracy specified by a user, and the semantic accuracy relies on use of geometric configurations of cameras capturing the multi-view video sequence, wherein the search range determinator is to constrain the search range by finding a position of an initial seed on the epipolar line using a disparity vector and wherein the constrained search range is centered around the initial seed ~~and a height of the search range is determined~~ ~~by the desired correlation between efficient compression and semantic accuracy~~; ~~and~~

a searcher to search the second image within the constrained search range for a match of the one or more pixels identified in the first frame for use by a

motion vector calculator to compute a motion vector for the one or more pixels, the motion vector to be transmitted as part of a compressed representation of the first frame, and to search a third image within a search range constrained by a second correlation between efficient compression and semantic accuracy, the second correlation specified by the user and different from the first correlation.

27. (Previously Presented) The apparatus of claim 26 wherein the position of the epipolar line depends on the geometric configurations of the cameras.

28. (Original) The apparatus of claim 26 wherein the one or more pixels in the first frame represent a block.

29. (Previously Presented) The apparatus of claim 26 wherein the search range determinator is further to compute the epipolar line in the second frame.

30. (Currently amended) The apparatus of claim 26 wherein the search range determinator is to constrain the search range by determining parameters of a window covering the initial seed and the epipolar line based on the ~~desired~~ first correlation between efficient compression and semantic accuracy.

31. (Currently amended) The apparatus of claim 26 wherein the search range determinator is further to communicate to [[a]] the user a user interface

facilitating user input of the ~~desired~~ <u>first</u> correlation between efficient

compression and semantic accuracy.